

C4
digested M13mp19. Thus, as in Example I, one set of oligonucleotides begins with the addition of A followed by nine rounds of split and mix synthesis wherein the oligonucleotide is extended subunit-wise by 3'-phosphoramidite derivatized 4-mers corresponding to the subunits of Table I. The synthesis is then completed with the nucleotide-by-nucleotide addition of one half of the Sma I recognition site (GGG), two C's, and a 5'-monophosphate, e.g. via the Phosphate-ON reagent available from Clontech Laboratories (Palo Alto, CA). The other set of oligonucleotides begins with the addition of three C's (portion of the Sma I recognition site) and two G's, followed by nine rounds of split and mix synthesis wherein the oligonucleotide is extended by 3'-phosphoramidite derivatized 4-mers corresponding to the complements of the subunits of Table I. Synthesis is completed by the nucleotide-by-nucleotide addition of the Hind III recognition site and a 5'-monophosphate. After separation from the synthesis supports the oligonucleotides are mixed under conditions that permit formation of the following duplexes (SEQ ID NO:18):

5' -pGGGCC (w₁) (w₁) (w₁) (w₁) (w₁) (w₁) (w₁) (w₁) (w₁) A
CCC GG (**) (**) (**) (**) (**) (**) (**) (**) (**) TTCGAp-5'

The mixture of duplexes is then ligated into a Sma I/Hind III-digested M13mp19. A repertoire of tag complements are synthesized on CPG microparticles as described above."

5. Please amend the paragraph in column 25, lines 61-67, as follows:

C5
"After hybridization and ligation, as described in Example I, the loaded microparticles are treated with Fok I to produce a 4-nucleotide protruding strand of a predetermined sequence. A 10:1 mixture (probe 1:probe 2) of the following probes (SEQ ID NO:3, SEQ ID NO:8, ~~SEQ ID NO:9,~~ and ~~SEQ ID NO:10~~) are ligated to the polynucleotides on microparticles."

IN THE SEQUENCE LISTING:

From columns 29 and 30, line 30, to columns 35 and 36, line 14, please delete the Sequence Listing and replace it with the following:

Sequence Listing

SUB D
C6
<110> Brenner, Sydney
<120> Compositons for Sorting Polynucleotides
<130> 802-04RE
<140> US 09/366,081
<141> 1999-08-02
<150> US 08/484,712
<151> 1995-06-07
<150> US 08/358,810
<151> 1994-12-19
<150> US 08/322,348
<151> 1994-10-13
<160> 19
<170> Microsoft Word97

~~<210> 1
<211> 38
<212> DNA
<213> Artificial Sequence
<220>
<223> Segment of vector.
<400> 1
gaggatgcct ttatggatcc actcgagatc ccaatcca 38~~

~~<210> 2
<211> 26
<212> DNA
<213> Artificial Sequence
<220>
<223> Adaptor.
<400> 2
aattcggatg atgcatgcat cgaccc 26~~

~~<210> 3
<211> 14
<212> DNA
<213> Artificial Sequence
<220>
<223> Adaptor.
<400> 3
tcgagtcatc cgat 14~~

~~<210> 4
<211> 39
<212> DNA
<213> Artificial Sequence
<220>
<223> Tag complement linked to solid phase support.
<400> 4
dddddddddd ddddddddddd ddddddddddd ddddddtgg 39~~

~~<210> 5
<211> 68
<212> DNA
<213> Artificial Sequence
<220>
<223> Primer for synthesis of first strand of cDNA. Primer contains tag
sequence.
<400> 5
ctagtcgacc ahhhhhhhhh hhhhhhhhhh hhhhhhhhhh hhhhhhgggt 50
tttttttttt tttttttt 68~~

~~<210> 6
<211> 11
<212> DNA
<213> Artificial Sequence
<220>
<221> any of a, c, g, t, or u at indicated position
<222> 1, 9-11~~

<223> a, c, g, t, or u

<400> 6

nrrgatcynn n

11

<210> 7

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Adaptor.

<400> 7

gggtcgatgc atgcatcatc cg

22

<210> 8

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Adaptor.

<400> 8

atcggatgac

10

<210> 9

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Adaptor containing oligonucleotide tag.

<400> 9

tcgacchhhh hhhhhhhhhh hhhhhhhhhh hhhhhhhhhh hha

43

<210> 10

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Adaptor containing oligonucleotide tag.

<400> 10

tcgacchhhh hhhhhhhhhh hhhhhhhhhh hhhhhhhhhh hha

43

<210> 11

<211> 16

<212> DNA

<213> Artificial Sequence

<220>

<223> Adaptor.

<400> 11

atcggatgac atcaac

16

<210> 12

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<221> any of a, c, g, t, or u at indicated position

<222> 1-3
<223> a, c, g, t, or u
<400> 12
nnnagttgat gtcacccgat 20

<210> 13
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<221> any of a, c, g, t, or u at indicated position
<222> 1-3

<223> a, c, g, t, or u
<400> 13
nnncgttgat gtcacccgat 20

<210> 14
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<221> any of a, c, g, t, or u at indicated position
<222> 1-3

<223> a, c, g, t, or u
<400> 14
nnnggttgat gtcacccgat 20

<210> 15
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<221> any of a, c, g, t, or u at indicated position
<222> 1-3

<223> a, c, g, t, or u
<400> 15
nnntgttgat gtcacccgat 20

<210> 16
<211> 37
<212> DNA
<213> Artificial Sequence
<220>
<221> any of a, c, g, t, or u at indicated position
<222> 1-5, 10-23, 25-37

<223> a, c, g, t, or u
<400> 16
nnnnnggatg nnnnnnnnnn nnntnnnnnn nnnnnnn 37

<210> 17
<211> 43
<212> DNA
<213> Artificial Sequence
<220>
<223> Adaptor containing oligonucleotide tag.